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THE HARVARD SCHOOL OF PUBLIC HEALTH

55 SHATTUCK STREET
BOSTON, MASSACHUSETTS

INCLUDING
COURSES OF INSTRUCTION
FOR 1946-47



PUBLISHED BY THE UNIVERSITY

OFFICIAL REGISTER OF HARVARD UNIVERSITY

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ANNOUNCEMENT
OF THE
HARVARD SCHOOL OF
PUBLIC HEALTH

55 SHATTUCK STREET
BOSTON, MASSACHUSETTS



1946

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CALENDAR FOR THE ACADEMIC YEAR 1946-47

<i>September 20, Friday.</i>	Registration of students.
<i>September 23, Monday.</i>	Fall Term begins.
<i>October 12, Saturday.</i>	Columbus Day: a holiday.
<i>November 11, Monday.</i>	Armistice Day: a holiday.
<i>November 21, Thursday.</i>	Thanksgiving Day: a holiday.

RECESS FROM DECEMBER 22, 1946 TO JANUARY 5, 1947, INCLUSIVE

<i>January 27, Monday.</i>	Mid-year examinations begin.
<i>February 3, Monday.</i>	Spring Term begins.
<i>February 22, Saturday.</i>	Washington's Birthday: a holiday.

RECESS FROM MARCH 30 TO APRIL 6, 1947, INCLUSIVE

<i>April 19, Saturday.</i>	Patriots' Day: a holiday.
<i>May 26, Monday.</i>	Final examinations begin.
<i>May 30, Friday.</i>	Memorial Day: a holiday
<i>June 5, Thursday.</i>	COMMENCEMENT.

The academic year is divided into the following periods:

<i>Mon., Sept. 23-Sat., Oct. 19</i>	First Month
<i>Mon., Oct. 21-Sat., Nov. 16</i>	Second Month
<i>Mon., Nov. 18-Sat., Dec. 14</i>	Third Month
<i>Mon., Dec. 16-Wed., Jan. 29</i>	Fourth Month ¹
<i>Mon., Feb. 3-Sat., March 1</i>	Fifth Month
<i>Mon., March 3-Sat., March 29</i>	Sixth Month
<i>Mon., April 7-Sat., May 3</i>	Seventh Month ²
<i>Mon., May 5-Sat., May 31</i>	Eighth Month

¹ Recess from December 22, 1946 to January 5, 1947, inclusive.

² Recess from March 30 to April 6, 1947, inclusive.

ADMINISTRATIVE OFFICERS

President: JAMES BRYANT CONANT, A.B., Ph.D., LL.D., S.D., L.H.D.,
D.C.L., D.Sc.

Office, 1 Massachusetts Hall, Cambridge.

Dean: JAMES STEVENS SIMMONS, S.B., M.D., Ph.D., Dr.P.H.,
S.D. (hon.).

Office, School of Public Health, 55 Shattuck Street, Boston.

Assistant Dean: HUGO MUENCH, A.B., M.D., Dr.P.H., A.M. (hon.).

Office, School of Public Health, 55 Shattuck Street, Boston.

Secretary of the School: MARGARET GUSS BARNABY, A.B.

Office, School of Public Health, 55 Shattuck Street, Boston.

Physician to Students: MYLES PIERCE BAKER, M.D.

Office, Room 103, Building A, Harvard Medical School,
25 Shattuck Street, Boston.

Bursar: ROY VINCELLE PERRY.

Office, Lehman Hall, Cambridge.

FACULTY OF PUBLIC HEALTH *

JAMES BRYANT CONANT, A.B., Ph.D., LL.D., S.D., L.H.D., D.C.L., D.Sc., *President.*

JAMES STEVENS SIMMONS, S.B., M.D., Ph.D., DR.P.H., S.D. (hon.), *Dean and Professor of Public Health.*

HUGO MUENCH, A.B., M.D., DR.P.H., A.M. (hon.), *Assistant Dean and Professor of Biostatistics.*

ALICE HAMILTON, M.D., A.M., S.D., *Assistant Professor of Industrial Medicine, Emeritus.*

FREDERICK FULLER RUSSELL, M.D., S.D. (hon.), *Professor of Preventive Medicine and Epidemiology, Emeritus.*

RICHARD PEARSON STRONG, Ph.B., M.D., S.D. (hon.), *Professor of Tropical Medicine, Emeritus.*

ERNEST EDWARD TYZZER, Ph.B., A.M., M.D., S.D. (hon.), *George Fabyan Professor of Comparative Pathology, Emeritus and Professor of Tropical Medicine, Emeritus.*

EDWIN BIDWELL WILSON, A.B., Ph.D., *Professor of Vital Statistics, Emeritus.*

RICHARD MASON SMITH, A.B., M.D., S.D. (hon.), *Thomas Morgan Rotch Professor of Pediatrics, Emeritus.*

MELVILLE CONLEY WHIPPLE, A.M. (hon.), *Associate Professor of Sanitary Chemistry.*

CECIL KENT DRINKER, S.B., M.D., S.D. (hon.), A.M. (hon.), *Professor of Physiology.*

CONRAD WESSELHOEFT, M.D., *Clinical Professor of Infectious Diseases.*

CHARLES WALTER CLARKE, A.M., M.B.Ch.B., *Clinical Professor of Public Health Practice.*

HAROLD COE STUART, Litt.B., M.D., A.M. (hon.), *Professor of Maternal and Child Health.*

* Arranged, with the exception of the President and Deans, on the basis of collegiate seniority.

PHILIP DRINKER, S.B., Chem.E., S.D. (hon.), LL.D., A.M. (hon.),
Professor of Industrial Hygiene.

BERTHA SHAPLEY BURKE, A.M., *Assistant Professor of Maternal and
Child Nutrition.*

GORDON MASKEW FAIR, S.M., *Dean of the Graduate School of Engi-
neering, Abbott and James Lawrence Professor of Engineering
and Gordon McKay Professor of Sanitary Engineering.*

JOHN EVERETT GORDON, S.B., Ph.D., M.D., A.M. (hon.), *Professor
of Preventive Medicine and Epidemiology.*

CONSTANTIN PRODROMOS YAGLOU, B.A., S.B., M.M.E., *Associate Pro-
fessor of Industrial Hygiene.*

CARL RUPP DOERING, A.B., M.D., S.D., *Assistant Professor of Bio-
statistics.*

SAMUEL BROWN KIRKWOOD, A.B., M.D., *Assistant Professor of
Maternal Health.*

EDWARD WARREN MOORE, A.M., *Associate Professor of Sanitary
Chemistry.*

JANE WORCESTER, A.B., *Associate in Biostatistics.*

FREDRICK JOHN STARE, S.M., Ph.D., M.D., *Associate Professor of Nu-
trition.*

VLADO ANDREW GETTING, A.B., M.D., Dr.P.H., *Lecturer on Public
Health Practice.*

HAROLD ALLEN THOMAS, JR., S.D., *Assistant Professor of Sanitary
Engineering.*

SHIH LU CHANG, M.D., Dr.P.H., *Assistant Professor of Sanitary
Biology.*

LESLIE SILVERMAN, S.D., *Assistant Professor of Industrial Hygiene.*

DAVID MARK HEGSTED, S.M., Ph.D., *Assistant Professor of Nutrition.*

MARSHALL CLINTON, JR., A.M., M.D., *Associate in Industrial Hygiene.*

JAMES LAVERRE WHITTENBERGER, S.B., M.D., *Associate in Physiology.*

The names of the other officers of instruction are given in their
respective departments as listed under Content of the Courses,
pages 26-45.

ADMINISTRATIVE BOARD

President JAMES B. CONANT, A.B., Ph.D., LL.D., S.D., L.H.D., D.C.L., D.Sc. (*ex officio*).

JAMES S. SIMMONS, S.B., M.D., Ph.D., Dr.P.H., S.D. (hon.), *Dean and Professor of Public Health*.

HUGO MUENCH, A.B., M.D., Dr.P.H., A.M. (hon.), *Assistant Dean and Professor of Biostatistics*.

GORDON M. FAIR, S.M., *Dean of the Graduate School of Engineering and Professor of Sanitary Engineering*.

FREDRICK J. STARE, S.M., Ph.D., M.D., *Associate Professor of Nutrition*.

COMMITTEES OF THE FACULTY

Committee on Admissions

HUGO MUENCH, Chairman; HAROLD C. STUART, FREDRICK J. STARE.

Committee on General Examinations

GORDON M. FAIR, Chairman; BERTHA S. BURKE, CARL R. DOERING, HUGO MUENCH.

Committee on Degrees

HAROLD C. STUART, Chairman; PHILIP DRINKER, JOHN E. GORDON, HUGO MUENCH.

Committee on Curriculum

JOHN E. GORDON, Chairman; CECIL K. DRINKER, PHILIP DRINKER, HUGO MUENCH, FREDRICK J. STARE, HAROLD C. STUART.

THE COMMITTEE APPOINTED BY THE BOARD OF
OVERSEERS TO VISIT THE SCHOOL OF
PUBLIC HEALTH

EDWARD B. KRUMBHAAR

G. BARRY BINGHAM

ROBERT AMORY

S. BRUCE BLACK

THOMAS J. CARTER

GEORGE B. DARLING

DAVID F. EDWARDS

MARTHA M. ELIOT

CHARLES E. HODGES, JR.

JAMES H. RAND, JR.

ANDREW J. WARREN

CHARLES F. WILINSKY

HUNTINGTON WILLIAMS

HISTORICAL STATEMENT

THE HARVARD SCHOOL OF PUBLIC HEALTH first gave instruction to students in the academic year 1922-23. Activity in professional education in public health had been steadily increasing in Harvard University over a period of more than two decades before the actual founding of the School as a result of the influence of Dr. Henry P. Walcott, for many years senior Fellow of the Harvard Corporation, himself an internationally known pioneer in the field of public health. This trend was a gradual development, but was characterized by certain important steps, the first of which was the establishment in 1909 of the Department of Preventive Medicine and Hygiene in the Medical School, — the first such department in the United States. The degree of Doctor of Public Health was first conferred in 1911. In this same year a Department of Sanitary Engineering was inaugurated in the Graduate School of Engineering. In 1913 the Department of Tropical Medicine, and in 1918 the Division of Industrial Hygiene, with clinical and laboratory facilities, were organized in the Harvard Medical School.

In 1913 the "Harvard-Technology" School of Public Health was organized. It was under the joint management of Harvard University and the Massachusetts Institute of Technology. This School operated until the fall of 1922, when it was superseded by the new Harvard School of Public Health which was made possible by a generous endowment for this purpose from the Rockefeller Foundation. This endowment is most appropriately known as the Henry P. Walcott Fund of Harvard University.

Besides the Walcott Fund, the Rockefeller Foundation at this time also presented the School with sufficient funds to purchase and equip a building standing on land adjacent to that occupied by the Medical School, the Children's Hospital and the Peter Bent Brigham Hospital in which to house the administrative offices and as many as possible of the various groups concerned with instruction and research in public health. It was obviously impossible to provide space in the

new School of Public Health building for such departments as Bacteriology, Preventive Medicine and Hygiene, Tropical Medicine, Parasitology and the Library, all of which had existed in the Medical School for some years. For this reason, as well as to avoid duplication in facilities, the departments named above were organized as joint departments, supported financially by both the School of Public Health and the Medical School. There was a similar joint arrangement between the Graduate School of Engineering and the School of Public Health in respect to Sanitary Engineering. Those departments which were entirely supported by the School of Public Health, Vital Statistics, Maternal and Child Health, Public Health Administration, Physiology and Industrial Hygiene, were either housed in the School of Public Health building or in quarters rented by the School.

In 1946, the Rockefeller Foundation made an additional grant to the School of Public Health of funds to be expended during the succeeding ten years. To provide additional space for the School, the Collis P. Huntington Memorial Hospital Building, located at Huntington Avenue and Shattuck Street, was made available. On July 1, 1946, the School of Public Health was separated administratively from the Medical School and became independent in respect to budgets and faculty appointments. The School will continue to cooperate closely with the Medical School in teaching and research as it does with the School of Engineering and other Schools of the University.

GENERAL STATEMENT

PROGRAMS OF STUDY

The programs of study in the School of Public Health are based on the principle that a thorough training in the disciplines of the science of public health is essential to the success of the individual who practices or teaches public health, or who engages in research in this field. The School does not seek to prepare expert technicians for particular branches of departments of public health, although much

of the instruction incidentally does familiarize students with many specialized public health problems. The primary purpose of the School is to provide a better understanding of the nature and broad significance of epidemiology, sanitation, biostatistics and public health administration, and of the specialties within those four fields, so that students may prepare themselves for careers as public health administrators, teachers in professional schools, directors of research or as specialists in such fields as maternal and child health, industrial health, the dissemination of health information, nutrition, and biostatistics.

Programs of study are adapted to the needs of individual students. Special students, who are not candidates for degrees, who seek to prepare for work in a particular field, may concentrate in the broad field of problems in which their major interest lies. Those who complete the requirements for the first degree in public health with honor may devote most of their time to research directed toward the preparation of doctoral dissertations. These students may supplement and round out their previous graduate training through registering for courses offered in the other schools and departments of instruction in the University.

FACILITIES

The offices of the School of Public Health are located at 55 Shattuck Street, Boston, in close proximity to the Medical School, the School of Dental Medicine, the Peter Bent Brigham Hospital, the Children's Hospital, and the Lying-in Hospital. The Antitoxin and Vaccine Laboratory of the Massachusetts Department of Public Health is within a comparatively short distance of the School. There is a cooperative arrangement with the Medical School so that all the facilities of either School and of the hospitals are fully available to the students of both schools. In Cambridge the graduate departments of the University offer opportunities for work in certain fields of special interest to public health students. For example, students may elect courses in sociology, business administration, the theory of government, common law, sanitary engineering and other subjects.

Several types of well organized public health activities lie within a short distance of the School. Close affiliation is maintained between the School and the Massachusetts Department of Public Health, thus assuring students an opportunity not only to observe but actually to participate under competent direction in state health department activities. The Health Department of the City of Newton and of the Town of Brookline, whose Directors of Health are on the teaching staff of the School, have been developed as special training grounds for students of local public health administration in all its phases.

A cooperative field training project has been organized between the School of Public Health and the Massachusetts Department of Public Health by which students may register at the School of Public Health during the summer term and do field work in one or more of the health districts of the Massachusetts Department of Public Health, in the Biologic Laboratories of that Department, and in the health departments of Newton and Brookline. This field training is carefully supervised by the Commissioner of Public Health and by the Head of the Department of Public Health Practice of the School.

The facilities of the hospitals and clinics of the Massachusetts Department of Public Health and of other official agencies, as well as those of the various semi-official agencies, are available for field training in child health, tuberculosis control, treatment of contagious diseases of childhood, care of mental defectives, rehabilitation of crippled children, correction of dental defects, and other types of activity which relate directly to the promotion of health and social welfare. Opportunity is also offered for training in hospital administration under competent direction. Boston being the center of a great industrial metropolitan area, students have opportunity to observe at first hand all the public health problems that large industrial populations must face.

Libraries

The joint Library of the School of Public Health and the Harvard Medical School is on the second floor of the Administration Building of the Medical School. It is open from 9 A.M. until 10 P.M. on week days, from 9 A.M. until 5 P.M. on Saturdays, and from 2 P.M.

until 6 P.M. on Sundays. There are at present 85,000 volumes, 198,000 pamphlets, and 612 current periodicals on file in this library.

Students also have the privilege of using the College Library in Cambridge, as well as the various departmental libraries belonging to the University, in all of which there are 3,945,318 volumes and pamphlets.

The Boston Public Library is open to students who are residents of Boston, and to students not residents of Boston who have filed a bond at the Bursar's Office.

The Boston Medical Library, No. 8 The Fenway, contains about 192,000 bound volumes, 134,000 pamphlets, and 475 current periodicals on file. For those who desire to consult medical literature, this very valuable library is open on week days from 9.00 A.M. to 5.00 P.M., and on Mondays and Thursdays until 10 P.M., from the middle of October to the end of May.

REQUIREMENTS FOR ADMISSION AND FOR DEGREES

Men or women who are applicants for admission to the School must satisfy the Committee on Admissions of their academic fitness. The record of courses completed as described in the application for admission is not in itself sufficient evidence of the fitness of a prospective candidate. The Committee may require additional evidence of present ability to utilize the training received and to profit by the courses administered by the School. The right is reserved to reject any applicant, or to accept an applicant as a special student rather than as a candidate for a degree until he demonstrates his ability to succeed in the work of the School.

All inquiries and communications regarding admission should be addressed to the Secretary, Harvard School of Public Health, 55 Shattuck Street, Boston 15, Massachusetts.

MASTER OF PUBLIC HEALTH

Requirements for Admission

The course leading to the degree of Master of Public Health is designed primarily for graduates in medicine, but it is also appro-

priate for public health workers who have received acceptable training or experience in public health practice. Each applicant must convince the Committee on Admissions that he is prepared to complete the course with distinction.

Applicants for this degree must belong to one of the following categories:

1. Graduates of acceptable schools of medicine, veterinary medicine or dentistry.
2. Graduates in arts or sciences with adequate training in the basic medical sciences, who have completed either
 - a. One academic year of acceptable graduate work in a public health field, *or*
 - b. Three years of acceptable full-time experience in a responsible position in public health practice.

Requirements for the Degree

1. One academic year, consisting of two sixteen-week terms, must be spent in residence at the University.

2. The student must complete thirty-two credit units with distinction. He may elect a larger number of courses but the program of work he desires to pursue must meet the approval of the Administrative Board.

The courses of the curriculum are listed below, with the credit unit value for each course listed. These values indicate the approximate proportion of the student's total program the course is intended to occupy.

3. At the end of the academic year a comprehensive examination is given which is designed to test the student's knowledge and judgment, and his ability to coordinate the basic public health subjects of administration, epidemiology, sanitation and statistics, and also the various specialties in the field of public health. In order to be recommended for the degree of Master of Public Health the student must pass this examination with distinction.

Fall Term

<i>Course</i>	<i>Title</i>	<i>Credit Units</i>
Biostatistics 1a.	Principles of Biostatistics	4
Epidemiology 1a.	Introduction to Epidemiology	1
Epidemiology 5a.	Special Problems in Infectious Diseases	.5
Industrial Hygiene 2a.	Industrial Air Analysis	3
Maternal and Child Health 1a.	Basic Problems in Maternal and Child Health	2
Maternal and Child Health 2a.	Growth and Development	.5
Maternal and Child Health 3a.	Obstetrical Problems	.5
Nutrition 1a.	Basic Nutrition and Its Application to Public Health	3
Nutrition 3a.	Journal Club	.5
Public Health Practice 1a.	Principles of Public Health Administration	3
Public Health Practice 5a.	Control of Tuberculosis	1.5
Public Health Practice 9a.	Psychosocial Problems	.5
Sanitary Engineering 1a.	Principles of Sanitation	4

Spring Term

<i>Course</i>	<i>Title</i>	<i>Credit Units</i>
Biostatistics 2b.	Statistical Analysis	3
Epidemiology 2b.	Epidemiology of Acute Communicable Diseases	2
Epidemiology 3b.	Epidemiology of Parasitic and Exotic Diseases	3
Epidemiology 4b.	Clinical Aspects of Infectious Diseases	1.5
Epidemiology 5b.	Special Problems in Infectious Diseases	.5
Epidemiology 6b.	Military Preventive Medicine	.5
Industrial Hygiene 1b.	Basic Problems in Industrial Hygiene	4
Industrial Hygiene 2b.	Industrial Air Analysis	3
Maternal and Child Health 1b.	Basic Problems in Maternal and Child Health	1
Maternal and Child Health 4b.	Nutritional Problems	.5
Maternal and Child Health 5b.	Demonstrations of Clinical and Field Services	1
Maternal and Child Health 6b.	Administration of Health Department Activities	1

<i>Spring Term (continued)</i>		
<i>Course</i>	<i>Title</i>	<i>Credit Units</i>
Nutrition 2b.	Techniques of Public Health	
	Nutrition	1
Nutrition 3b.	Journal Club	.5
Physiology 1b.	Ecology	2
Public Health Bacteriology 1b.	Recent Advances in Bacteriology	2
Public Health Bacteriology 2b.	Applied Immunology	1
Public Health Practice 2b.	Organization and Administration of	
	Health Department Subdivisions	1.5
Public Health Practice 4b.	Venereal Disease Control	2.5
Public Health Practice 6b.	Control of Cancer	.5
Public Health Practice 7b.	Hospital Administration	2
For description of other courses, with time and credit to be arranged, see pages 26-45.		

DOCTOR OF PUBLIC HEALTH

The degree of Doctor of Public Health is granted on completion of a plan of independent investigation which forms the basis of a thesis which must be presented as one of the final requirements for graduation. The thesis must display independent ability and originality in a special field.

Requirements for Admission

1. An applicant for admission to candidacy for this degree must be either (a) a graduate of an approved medical school, or (b) an individual lacking a medical degree who possesses exceptional basic training and experience in the field of public health. An individual fulfilling these requirements can be admitted to candidacy only upon the approval of the Faculty of Public Health.

2. One academic year in residence must have been devoted to the courses forming the curriculum for the degree of Master of Public Health. These courses must have been completed with honor. A student who has fulfilled the requirements for the Master of Public Health degree with honor elsewhere may, on passing the comprehensive examination at this School with honor, be accepted provisionally as a candidate for the degree of Doctor of Public Health, final acceptance depending upon the progress of the work done by the student.

Requirements for the Degree

1. The required work for the degree may be completed in one year of resident research although the preparation of an acceptable thesis may consume more time than this. Those without a medical degree will ordinarily need to devote at least two years to the preparation of the thesis after receiving the Master of Public Health degree. One academic year in residence is required of all candidates for the degree.

2. Upon admission to candidacy the student must present his plan of investigation to the Committee on Degrees. When the plan is accepted an advisory committee is appointed which supervises the work of the student and the preparation of his thesis and then reports on the thesis to the Committee on Degrees. If the thesis is accepted, the Chairman of the Committee on Examinations conducts an oral examination by the Faculty of Public Health on the thesis and on those public health subjects to which the thesis is related.

3. Two bound copies of the thesis must be deposited in the Dean's Office at least four weeks before the date on which the degree is to be conferred. Each copy must be accompanied by a summary not exceeding 1200 words in length, which shall indicate clearly the purposes, methods and results of the investigation.

CERTIFICATE IN PUBLIC HEALTH

Occasionally students may wish to confine their studies to some particular field of public health, such as biostatistics, epidemiology, industrial hygiene, maternal and child health, public health practice, public health bacteriology, or nutrition. Such students must secure the approval of the head of the department in which they wish to specialize. If they do honor work, they may then be granted the Certificate in Public Health in that specialty as evidence of their accomplishment. Ordinarily, qualified students are encouraged to take a sufficiently broad program to enable them to pass with distinction the comprehensive examination and thus to become eligible for the degree of Master of Public Health.

SPECIAL STUDENTS

Applicants who do not meet the academic requirements for admission as candidates for degrees may be admitted to certain courses and programs of study at the discretion of the head of each department, and subject to conditions specified by him with the approval of the Committee on Admissions.

Students unable to spend a full academic year at the School may come for individual courses if their preparation for the course is approved by the head of the department.

As the capacity of the School is limited, and priority is given to degree candidates, the number of special students who can be admitted is dependent on the number of applicants who are accepted for the regular course. Therefore, it is not possible to know until early in the fall how many special students can be received.

MASTER OF EDUCATION IN THE FIELD OF PUBLIC HEALTH EDUCATION

The program in this field is offered cooperatively by the School of Public Health and the Graduate School of Education and is ordinarily divided equally between these two fields.

This program is designed for experienced teachers who desire to prepare for the work of the supervisor or director of public health education and for those eligible for the degree of Master of Public Health who seek to prepare for work in the field of dissemination of health information in a department of public health. Courses in the biological and physical sciences are prerequisite to the courses in public health. The standard program would be divided between the two schools as follows:

School of Public Health

Sanitary Engineering 1a

Nutrition 1a

Epidemiology 1a and 2b

Public Health Practice 1a and 2b

Maternal and Child Health 1a and 1b

School of Education

Educational Administration 1

Educational Administration 2

Educational Psychology 13

Social Relations 86 (under the Faculty of Arts and Sciences)

Two introductory courses drawn from:

Educational Psychology 1

Educational Measurement 1

Philosophy of Education 1

Secondary Education 1

Principles of Teaching 5

For further information write The Secretary, Graduate School of Education, Lawrence Hall, Cambridge 38, Massachusetts.

MASTER OR DOCTOR OF SCIENCE IN ENGINEERING

Graduates of engineering colleges or scientific schools of recognized standing who are interested in the sanitary engineering or industrial hygiene aspects of public health may be admitted to the Graduate School of Engineering as candidates for the degree of Master or Doctor of Science. They may elect any of the courses offered in the School of Public Health.

For further information write The Secretary, Graduate School of Engineering, Pierce Hall, Cambridge 38, Massachusetts.

GENERAL INFORMATION*Registration*

Registration in the School of Public Health for the academic year 1946-47 is on Friday, September 20. Adequate time should be allowed by the student for the discussion of his program with the Dean or Assistant Dean of the School, whose approval of each program is essential.

All students who are not citizens of the United States will be referred before registration to the Counsellor for Foreign Students, 24 Quincy Street, Cambridge, where they will present a statement of

admission, show their passports, and fill out a Student Registration form. They will then receive a card for presentation at registration, showing they have been cleared by the office of the Counsellor for Foreign Students.

Veterans

Information about the procedure to be followed in applying for educational benefits under the G.I. Bill may be secured from the Secretary of the School or from the Counsellor for Veterans, Government Aid Department, Weld Hall, Cambridge.

Veterans must file with the Dean a form giving complete information concerning their discharge from the services. Admission of veterans to the School is subject to approval by the Department of Hygiene of the University.

Housing

There are no dormitories for School of Public Health students but they may get their meals at Vanderbilt Hall dining room, the Medical School dormitory, which is operated on a cafeteria system. It is usually possible to find furnished rooms in hotels or private homes in the vicinity of the School, or in Brookline, a residential district within a short distance. The School will supply such information as can be secured about available quarters but the responsibility for obtaining quarters rests with the student. Requests for assistance in finding living quarters may be made to the Harvard Housing Office, Straus Hall, Cambridge, which has been organized to help married veterans and other new students to find accommodations during the present housing shortage. Students with families are advised to come at least three weeks in advance of registration and not to bring their families with them until living quarters are secured. Other students should plan to reach Boston at least a week in advance of registration.

Fees and Expenses

The fee for tuition for each term is \$200 for all full-time students who are candidates for degrees. For part-time students the fee varies according to the courses taken and is based on the proportion of the annual fee for instruction which the credit units for each

course bear to the total number of credits necessary for the degree of Master of Public Health, plus five dollars for each course. For example, a part-time student taking a course with a credit unit value of two would pay a tuition fee of \$30; a student taking a course with a credit unit value of four would pay \$55.

Each full-time student will be charged a Medical and Infirmary fee of \$15 per term. Part-time students working at the rate of substantially half-time or less and living at home may be excused by the Bursar from the payment of such fee at any time within two weeks after his registration upon the recommendation of the Dean.

Bills for tuition and fees will be issued and payable as follows:

	<i>Issued</i>	<i>Payable</i>	
<i>Fall Term</i>	Sept. 23	Sept. 25	{ ½ of the tuition for the term Medical and Infirmary Fee for the term
	Nov. 20	Dec. 10	{ ½ of the tuition for the term Board through October 31 Room rent for the term Miscellaneous charges
	Jan. 20	Feb. 10	{ ½ of the tuition for the term Medical and Infirmary Fee for the term Board through December 31 Miscellaneous charges
<i>Spring Term</i>	Feb. 3	Feb. 5*	{ ½ of the tuition for the term Medical and Infirmary Fee for the term
	March 20	Apr. 10	{ ½ of the tuition for the term Board through February 28 Room rent for the term Miscellaneous charges
	May 28	June 4	{ Board to the end of the term Miscellaneous charges

* Applies to entering students only.

Students who are candidates for degrees must pay all dues to the University at least one day before the day upon which the degrees are to be voted. A student who leaves during the year is charged to the end of the tuition period in which he leaves provided before that time he gives the Dean notice in writing of his withdrawal; otherwise he is charged to the end of the tuition period in which such notice is given.

A student who leaves the University for any reason whatever must pay all charges against him immediately upon receipt of a bill from the Bursar. Every student will be held responsible for the payment of fees until he has notified the Dean of his intention to withdraw from the School.

All term bills will be sent to the student at his local address unless the Bursar is requested in writing to send them elsewhere.

Bond Requirement

Upon entrance to the School every student is required to file with the Bursar a bond in the sum of \$500 as security for payment of University bills. The bond must be signed by two bondsmen, both of whom must be citizens of the United States, or by a surety company duly qualified to do business in Massachusetts. No officer or student of the University will be accepted as a bondsman and in no case will more than one parent be accepted. In lieu of the bond a student may deposit with the Bursar five hundred dollars in United States Treasury coupon-bearing bonds, or five hundred dollars in cash, which will bear no interest. Blank forms of bonds may be obtained at the Dean's Office or from the Bursar.

Student Health Service

In return for payment of the medical fee the School provides a physician to students who will give medical advice and treatment without charge during the school year. He is available for consultation by students at his office in Building A, Harvard Medical School, from 8.30 to 9.00 A.M., and from 4.00 to 5.30 P.M. daily except Saturdays and holidays. He may also be seen at other times by appointment and at any time in case of emergency. The fee also covers,

when necessary, board and ordinary nursing care, for not more than a total of one week per term, in the Stillman Infirmary or in one of the teaching hospitals of the Medical School. There will be an extra charge for private rooms, special nursing care, X-rays and special treatment. In addition, each student is entitled to all the medical and other services that have been organized under the Student Health Service plan of the University.

Any illness necessitating absence from work should be reported to the Student Health Office by the student, or by an attending physician.

Under the auspices of the Department of Medicine of the Harvard Medical School students paying the medical fee will be required to undergo a complete medical examination shortly after admission to the School.

Evidence of having been satisfactorily vaccinated is required for entrance to Harvard University and a form of certification for this purpose is sent to each student who is accepted for admission.

Fellowships and Scholarships

Certain fellowships and scholarships derived from special gifts to the University are open to students in the several departments of the University. They are administered by the Committee on General Scholarships, of which the Dean of the Faculty of Arts and Sciences is the Chairman. Application for any of these fellowships or scholarships must be made on a special form which may be obtained from the Chairman of the Committee on General Scholarships, 5 University Hall, Cambridge 38, Mass. Some of these fellowships and scholarships are granted to persons not previously members of the University, though preference is given, as a rule, to students who have already given evidence of their qualifications by work done in some department of the University. Appointments to fellowships and scholarships for any academic term are made, in most cases, by the Corporation, on recommendation of the Committee on Fellowships, at the beginning of the preceding academic term.

CONTENT OF THE COURSES OFFERED BY THE FACULTY OF PUBLIC HEALTH

DEPARTMENT OF BIOSTATISTICS

HUGO MUENCH, A.B., M.D., Dr.P.H., A.M. (hon.), *Professor of Biostatistics and Head of the Department.*

CARL R. DOERING, A.B., M.D., S.D., *Assistant Professor of Biostatistics.*

JANE WORCESTER, A.B., *Associate in Biostatistics.*

Biostatistics 1a. Principles of Biostatistics

Lectures and laboratory work. *Mondays and Wednesdays, 11-12 and 1:30-4:30, fall term.* Dr. MUENCH and associates.

Credit 4 units.

This course is designed to cover the basic principles of statistical method as applied to biology in general and to public health problems in particular. Subjects presented will include collection, tabulation and elementary analysis of data; measures of center and of dispersion; and sampling from variable populations. During the third and fourth months the course will be integrated with Epidemiology 1a and will include topics of particular value in epidemiological investigations, such as significance tests, life tables, elementary correlation and the fitting of trend lines.

Biostatistics 2b. Statistical Analysis

Lectures, conferences and laboratory work. *Tuesdays and Thursdays, 1:30-4:30, spring term.* Dr. MUENCH and associates.

Credit 3 units.

Completion of Biostatistics 1a, or the equivalent, is prerequisite. The course will include elements of statistical analysis of interest to the research worker in biology, including the treatment of discrete and continuous frequency distributions, the use and fitting of different simple curves of epidemiological interest and the general theme of interrelation of two or more variables.

Biostatistics 20. Biostatistical Research

Time and credit to be arranged according to amount of work done.

Reading and research in selected topics of biostatistics by students specializing in this field or those who desire supervision in working out a statistical problem in their own special field of interest.

DEPARTMENT OF EPIDEMIOLOGY

JOHN E. GORDON, S.B., Ph.D., M.D., A.M. (hon.), F.R.C.P. (Lond.), *Professor of Preventive Medicine and Epidemiology and Head of the Department.*

CONRAD WESSELHOEFT, M.D., *Clinical Professor of Infectious Diseases.*

ALFRED L. FRECHETTE, M.D., M.P.H., *Instructor in Epidemiology.*

JOHN J. POUTAS, A.B., M.D., M.P.H., *Instructor in Epidemiology.*

A. DANIEL RUBENSTEIN, A.B., M.D., M.P.H., *Instructor in Epidemiology.*

W. LLOYD AYCOCK, M.D., *Associate Professor of Preventive Medicine and Hygiene.*

LOUIS WEINSTEIN, S.M., Ph.D., M.D., *Instructor in Infectious Diseases.*

THEODORE H. INGALLS, A.B., M.D., *Assistant in Pediatrics.*

Division of Parasitology and Tropical Medicine

GEORGE C. SHATTUCK, M.D., A.M. (hon.), *Clinical Professor of Tropical Medicine.*

DONALD L. AUGUSTINE, S.D., D.Sc. (hon.), A.M. (hon.), *Associate Professor of Comparative Pathology and Tropical Medicine.*

QUENTIN M. GEIMAN, S.M., Ph.D., *Assistant Professor of Tropical Diseases.*

Epidemiology 1a. Introduction to Epidemiology

Lectures and seminars. *Fridays, 11-12 and 1:30-4:30, third and fourth months.* Dr. GORDON and associates. Given conjointly with Biostatistics 1a.

Credit 1 unit.

An introduction to epidemiology, presenting the principles, historical development and methods of epidemiologic investigation. Current and classical illustrations of epidemic and endemic prevalence are used to demonstrate the factors governing infection, disease and immunity in population groups. Selected problems dealing with the investigation and control of communicable and non-communicable disease illustrate the application of the epidemiologic method to public health practice.

Epidemiology 2b. Epidemiology of Acute Communicable Diseases

Lectures, conferences and laboratory exercises. *Mondays and Wednesdays, 1:30-4:30, Fridays, 1:30-3:30, fifth and sixth months.* Dr. GORDON and associates.

Credit 2 units.

A conference and laboratory course dealing with the specific epidemiological characteristics of the acute communicable diseases of temperate climates. The laboratory work demonstrates the field methods used in collection, analysis and interpretation of data derived from epidemic and endemic situations. Modes of infection are defined and the laws of epidemics examined. The correlation of clinical, field and laboratory procedures is emphasized in the development and evaluation of programs for the prevention of disease and the management of epidemics.

Epidemiology 3b. Epidemiology of Parasitic and Exotic Diseases

Lectures, laboratory exercises and demonstrations. *Mondays, Wednesdays, Fridays, 1:30-4:30, Saturdays, 9-1, seventh and eighth months.* Dr. AUGUSTINE, Dr. GORDON and associates.

Credit 3 units.

This course is designed to cover the broader aspects of parasitology and tropical medicine. Laboratory study of the commoner animal parasites of man is complemented by epidemiologic exercises illustrating typical epidemic and endemic distributions. The agency of insects and other arthropods in the transmission of disease receives special consideration. Tropical and exotic diseases of bacterial or viral nature are presented as epidemiologic problems with special attention to prevention and control.

Epidemiology 4b. Clinical Aspects of Infectious Diseases

Lectures, demonstrations, clinics and conferences. *Tuesdays and Fridays, 9-10, Clinics, Fridays, 3:30-5, fifth and sixth months.* Dr. WESSELHOEFT and associates.

Credit 1.5 units.

The care and management of patients with acute infectious diseases is presented with special reference to the problems of the epidemiologist and health officer. Diagnostic methods, isolation of patients in home and hospital, and modern methods of treatment are presented and discussed.

Epidemiology 5a and 5b. Special Problems in Infectious Diseases

Seminars and clinics. *Saturdays, 9:30-10:30, third and fourth months or seventh and eighth months.* Dr. WESSELHOEFT and associates.

Credit .5 unit.

An advanced course in clinical infectious diseases dealing with selected topics based on available clinical material at the Haynes Memorial Hospital.

Epidemiology 6b. Military Preventive Medicine

Seminars. *Two hours a week, seventh and eighth months, time to be arranged.* DR. GORDON and DEAN SIMMONS.

Credit .5 unit.

A series of seminars, conferences and demonstrations concerned with administrative and professional problems in military preventive medicine. Designed primarily for students from the military services. Admission by permission of the instructor.

Epidemiology 20. Special Investigation

Properly qualified workers may be assigned problems in the several fields of the Department of Epidemiology or may be aided in the development of their own interests.

DEPARTMENT OF INDUSTRIAL HYGIENE

PHILIP DRINKER, S.B., Chem.E., S.D. (hon.), LL.D., A.M. (hon.) *Professor of Industrial Hygiene and Head of the Department.*

CONSTANTIN P. YAGLOU, B.A., S.B., M.M.E., *Associate Professor of Industrial Hygiene.*

LESLIE SILVERMAN, S.D., *Assistant Professor of Industrial Hygiene.*

MARSHALL CLINTON, JR., A.M., M.D., *Associate in Industrial Hygiene.*

CHARLES R. WILLIAMS, Ph.D., *Instructor in Industrial Hygiene.*

THOMAS L. SHIPMAN, Ph.B., M.D., *Instructor in the Practice of Industrial Medicine.*

EMMA S. TOUSANT, LL.B., *Instructor in Workman's Compensation.*

ROMANO H. DEMEIO, Ph.D., *Instructor in Industrial Hygiene.*

HENRY C. MARBLE, A.B., M.D., *Assistant in Industrial Hygiene.*

C. GUY LANE, A.B., M.D., *Clinical Professor of Dermatology.*

ERICH LINDEMANN, Ph.D., M.D., *Associate in Psychiatry.*

Industrial Hygiene 1b. Basic Problems in Industrial Hygiene

Lectures and demonstrations. *Mondays and Wednesdays, 1:30-3:30, Fridays, 1:00-3:00, spring term. Field trips, eight Wednesdays, 1:30-5, dates to be announced.* PROFESSOR DRINKER, DR. CLINTON and associates.

Credit 4 units.

A course of lectures, demonstrations, clinics, and inspections showing the relation of working conditions to health, with special reference to the cause, prevention and treatment of industrial disabilities.

Industrial Hygiene 2a and 2b. Industrial Air Analysis

Laboratory work. *Tuesdays and Thursdays, 1:30-4:30, fall and spring terms.* Dr. SILVERMAN and Dr. WILLIAMS.

Credit 3 units in each term.

Laboratory exercises in measuring airflow, in appraising air conditioning and ventilating installations, in determining and identifying atmospheric impurities, and in making toxicological analysis of importance in industrial medical problems.

Engineering 441a. Heating and Ventilation

Lectures. *Mondays and Wednesdays, 8:30-10, fall term, at Pierce Hall, Cambridge.* Associate Professor YAGLOU.

The theory and practice of heating and ventilating. For engineers.

Engineering 441b. Air Conditioning

Lectures. *Mondays and Wednesdays, 8:30-10, spring term, at Pierce Hall, Cambridge.* Associate Professor YAGLOU.

Theory and practice of air conditioning. For engineers.

Industrial Hygiene 20. Research

A limited number of qualified students will be given an opportunity to do research work in industrial hygiene, toxicology, heating and ventilating, and air conditioning, by arrangement with the head of the Department.

DEPARTMENT OF MATERNAL AND CHILD HEALTH

HAROLD C. STUART, Litt.B., M.D., A.M. (hon.), *Professor of Maternal and Child Health and Head of the Department.*

BERTHA S. BURKE, A.M., *Assistant Professor of Maternal and Child Nutrition.*

SAMUEL B. KIRKWOOD, A.B., M.D., *Assistant Professor of Maternal Health.*

SHIRLEY B. KAUFMAN, S.M., *Assistant in Nutrition.*

KATHLEEN SCOBIE, S.M., *Research Fellow in Nutrition.*

CHARLES A. JANEWAY, A.B., M.D., *Thomas Morgan Rotch Professor of Pediatrics.*

WILLIAM T. GREEN, A.M., M.D., *Assistant Professor of Orthopedic Surgery.*

CLEMENT A. SMITH, M.D., *Assistant Professor of Pediatrics.*

STEWART H. CLIFFORD, M.D., *Instructor in Pediatrics.*

Introduction

Since the range of subjects necessarily dealt with under the Department of Maternal and Child Health is very broad, subjects pertaining to the health of

children and adults alike, which are dealt with by other departments of the School, are not considered. On the other hand, problems peculiar to maternity and childhood are discussed even though they may relate to the general fields of other departments. Thus the special aspects of diet during pregnancy and lactation, infant feeding, and diet at succeeding periods of childhood are presented. Communicable diseases commonly occurring in childhood are not studied in all aspects, but special problems such as immunization procedures and environmental control measures that are particularly applicable at certain periods of early life are discussed. Administrative procedures for the conduct of maternal and child health services are not fully considered as they may be studied in better perspective in connection with the administration of other health services under public health practice, but certain administrative procedures which are peculiar to these special services are given attention.

It is thus highly desirable that students interested in maternal and child health enroll for introductory courses in nutrition, communicable diseases and public health administration as well as taking as many of the courses offered by this Department as time permits. It is also desirable that such students arrange for field training in a maternal and child health unit of government after completion of the academic year, if such experience has not been obtained previously. Occasional field visits may be arranged in connection with the seminar courses given, but extensive visiting has been found impractical while these courses are in progress at the School.

The Department offers one introductory course of lectures, intended for all students desiring broad understanding and general orientation as to the problems and procedures of public health, as well as for those particularly interested in maternal and child health. This introductory course is given in two lectures a week during the first six months of the academic year, so that the students majoring in other departments can take it without concentrating on maternal and child health in any one period. The Department offers, in addition, for those particularly interested in maternal and child health and who intend to make this their special field, five advanced seminar courses which are so distributed throughout the year that all may be taken by students majoring in this field, while also taking the closely related courses offered by other departments. In the seminar courses, topics will be assigned each week to individual students for advanced study and presentation to the group. By this means student leadership and participation in the discussions is encouraged, and experience is afforded in reviewing the literature and in presenting the current status of important maternal or child health subjects.

Maternal and Child Health 1a and 1b. Basic Problems in Maternal and Child Health

Lectures. *Mondays and Wednesdays, 10-11, first month through sixth month.* DR. STUART, DR. KIRKWOOD and associates.

Credit 3 units; 2 units for 1a and 1 unit for 1b.

This course is divided into three parts, as follows: Part I. Maternal and neonatal health problems, including the following subjects: the normal course and physiological changes of pregnancy; nutritional requirements in relation to maternal health and the development of the fetus; the complications of pregnancy and maternal morbidity and mortality; the complications of labor, delivery and the puerperium and their management; abortions, stillbirths and neonatal deaths; the neonate and the physiological changes occurring during the neonatal period; care of the newborn infant; problems of the neonatal period; the premature infant and his care; and interrelations between maternal and fetal health.

From these various aspects a composite picture of preventive measures for the protection of both mother and infant is developed in relation to the pre-conceptional, prenatal, natal and postnatal periods. With this background the responsibility of the community to the woman throughout her entire child-bearing age is considered.

Part II. Problems of child health, with emphasis on the following subjects: Mortality statistics by age periods from birth to maturity; the nutritional and other requirements of the infant and child and their relation to the prevention of disease and promotion of optimum growth and development; the objectives and content of the principal child health services; special services for particular age groups or for special groups of physically, mentally or socially handicapped children.

Part III. Organization and procedures of maternal and child health services. This part of the course considers how public health and preventive medical services may be organized and may operate to best advantage under different circumstances to protect the health of pregnant women and of children of all ages. These questions will be considered in the principal groupings of prenatal care, delivery and newborn services, infant and preschool services and school services, with special attention under each to medical, nursing, nutrition and social services and education programs in connection with hospitals, clinics or schools.

Maternal and Child Health 2a. Growth and Development

Seminars. *Tuesdays, 3:30-5:30, first and second months.* Dr. Stuart and associates. The course will not be given for less than six students and is limited to fifteen students.

Credit .5 unit.

This course is given in the first two months as it provides basic information regarding the normal child and a useful background for all the courses given by this Department. The physical growth and development of the infant, the child and the adolescent are studied from the standpoint of their relation to

health requirements and health problems. Mental development and emotional characteristics are also considered. The problems of individual differences and normal variability are given much attention since they must be understood if health examinations are to accomplish more than to discover pathology. The methods of appraisal and recording of data relating to growth and development are studied and evaluated.

Maternal and Child Health 3a. Obstetrical Problems

Seminars. *Tuesdays, 3:30-5:30, third and fourth months.* Dr. KIRKWOOD.

The course will not be given for less than six students and is limited to fifteen students.

Credit .5 unit.

This course will enlarge upon the basic clinical problems touched upon in the introductory course, Part I, and will deal with recent advances in clinical obstetrics and gynecology. It is intended, not as training for resumption of clinical practice by the student, but as a method of bringing him abreast of the present clinical problems so that he may better judge the caliber of the work performed by the practitioners of his region. Major matters for discussion will include the following: obstetrical hemorrhage, toxemia, infection, dystocia, X-ray pelvimetry, Caesarean section, medical complications of pregnancy, the mechanism of prolapse, tumors of the generative organs, hormone therapy, nutritional control. Field trips to the Boston Lying-in Hospital and to the Free Hospital for Women will supplement the discussions. All of this material will be related to maternal health services as they operate today and as they may develop in the future.

Maternal and Child Health 4b. Nutritional Problems

Seminars. *Tuesdays, 3:30-5:30, fifth and sixth months.* Dr. STUART, Dr. STARE, Professor BURKE and Mrs. CASO. The course will not be given for less than six students and is limited to fifteen students.

Credit .5 unit.

This course is given conjointly with the Department of Nutrition. Food requirements are reviewed from the standpoints of particular age and sex differences in infancy and childhood. The special problems in practical feeding arising from dependence and immaturity and the means of dealing with them at different ages are also considered. Breast and formula feeding, the prevention and management of nutritional disturbances, the formation of good habits and attitudes toward foods, the school lunch and health education in nutrition are further subjects which receive attention. This course should be of particular value to those who are primarily interested in nutrition, although intended for all majoring in maternal and child health.

Maternal and Child Health 5b. Demonstrations of Clinical and Field Services

Clinical demonstrations and field exercises. *Eight Mondays, 1:30-3:30 and eight Thursdays, 10:30-12:30, spring term.* Dr. STUART, Dr. KIRKWOOD and associates. A section in this course must be limited to eight students, but two sections will be given if required.

Credit 1 unit.

Eight periods are devoted to demonstrations at prenatal clinics and other maternal health services. Five periods are spent at demonstration clinics held in connection with an infant and preschool child health conference of the City of Boston Health Department at the Children's Hospital and three periods are devoted to visits to and discussions with the staffs of other child health services.

Maternal and Child Health 6b. Administration of Health Department Activities

Seminars. *Tuesdays and Thursdays, 3:30-5:30, seventh and eighth months.* Dr. STUART and Dr. KIRKWOOD. The course will not be given for less than six students and is limited to fifteen students.

Credit 1 unit.

This course is given conjointly with the Department of Public Health Practice, and is concerned with the administrative aspects of the problems presented in the other courses of this Department. It will include the physical set-up of the prenatal clinic, the proper construction of the maternity hospital or the maternity ward of a general hospital, the postpartum and gynecological clinic, the provision of consultation services, the provision of complete maternal health services for economically marginal areas, the care of the unmarried mother, the problem of adoption, maternity benefit and insurance programs, the use of the public health nurse and nutritionist in maternal health work, the home delivery service, the midwifery service, post-graduate education for the practitioner and the nurse.

In like manner the organization and administration of infant and child health conferences, school health services, services for crippled and other handicapped children, nursing services, dental services, nutrition services, etc., as parts of a general public health program will be studied.

DEPARTMENT OF NUTRITION

FREDRICK J. STARE, S.M., Ph.D., M.D., *Associate Professor of Nutrition and Head of the Department.*

DAVID M. HEGSTED, S.M., Ph.D., *Assistant Professor of Nutrition.*

ELIZABETH K. CASO, S.M., *Instructor in Nutrition.*

ROBERT E. OLSON, A.B., Ph.D., *Instructor in Nutrition.*

JACK METCOFF, S.M., M.D., M.P.H., *Research Fellow in Nutrition.*

GEORGE V. MANN, A.B., Sc.D., M.D., *Research Fellow in Nutrition.*

ANDROMACHE G. TSONGAS, S.B., M.P.H., *Assistant in Nutrition.* (On leave of absence.)

ELIZABETH A. LOCKWOOD, A.M., M.P.H., *Research Fellow in Nutrition.*

KATHRYN A. TEW, S.M., *Assistant in Nutrition.*

A. BAIRD HASTINGS, S.B., Ph.D., S.D., *Hamilton Kuhn Professor of Biological Chemistry.*

JAMES H. SHAW, S.M., Ph.D., *Instructor in Nutrition.*

Nutrition 1a. Basic Nutrition and Its Application to Public Health

Lectures. *Mondays, Wednesdays, and Fridays, 9-10, fall term.* Dr. STARE and associates.

Credit 3 units.

The course deals with the fundamentals of the chemistry and physiology of nutrition and the practical application of the principles to the problems of human nutrition, especially in the field of public health.

Among the subjects discussed are energy metabolism; protein, mineral and vitamin metabolism; methods for establishing the minimum and optimum nutritional requirements, together with the problems of meeting these requirements, especially for low income groups. Dietary requirements are considered in their relation to growth, development, disease, pregnancy, lactation, and the formation and maintenance of dental structures. Methods of taking nutritional histories and the use of physical and chemical methods for evaluating the nutritional state of individuals or large groups are presented with special emphasis on nutritional surveys of population groups. The place of the nutritionist in the public health program is considered and various fields of a well-rounded nutrition service are discussed as it correlates with the activities of health, welfare, educational and industrial organizations. The principles of diet therapy are taught. The effect of various environmental, social, economic, and psychological factors upon food habits is also studied as they influence the nutritional status of an individual or group of people. The consequences of nutritional deficiencies and the relation of optimum nutrition to national and international health and economy are discussed. The nutritional problems of relief, rehabilitation, famine, and other emergencies are dealt with. The relation of production, distribution and preparation for the best use of foods is discussed, as are also the problems of food enrichment and fortification.

Nutrition 2b. Techniques of Public Health Nutrition

Seminars. *Wednesdays and Fridays, 1:30-3:30, fifth and sixth or seventh and eighth months.* Dr. STARE and Mrs. CASO.

Credit 1 unit.

The purpose of this seminar course is to give the student a more complete picture of the various phases of public health nutrition work and an opportunity to develop some of the techniques for nutrition education. The following subjects are considered: techniques and procedures for organizing and conducting a nutrition service; nutrition work with health, welfare, educational, industrial and institutional organizations; the study of factors affecting food habits; techniques of individual and group instruction; preparation and criticism of nutrition educational materials—exhibits, pamphlets, newspaper articles, radio talks, etc.; review and criticism of current books on nutrition and related subjects.

Additional time and credit for field work may be arranged for individual students. The Department of Nutrition participates in Community Nutrition Programs in various Boston suburbs and has excellent field facilities in community nutrition.

Prerequisite: Nutrition 1a or its equivalent.

Nutrition 3a and 3b. Journal Club

Seminars. *Thursdays, 12-1, fall and spring terms.* Dr. STARE and Dr. HEGSTED.

Credit .5 unit in each term.

Brief discussions of current literature in fundamental and applied nutrition and assigned topics.

Prerequisite: Nutrition 1a or its equivalent. Admission limited and subject to the approval of the instructor.

Nutrition 20. Advanced Nutrition

Time (at least 2 half days per week) and credit to be arranged. *Fall and spring terms.* Dr. STARE and associates.

Facilities are available for advanced work in nutrition along the following lines: fundamental research in nutrition, laboratory methods in nutrition, applied nutrition in public health and medicine, applied nutrition in food management and service.

Prerequisite: Nutrition 1a or its equivalent. Admission limited and subject to the approval of the instructor.

DEPARTMENT OF PHYSIOLOGY

CECIL K. DRINKER, S.B., M.D., S.D. (hon.), A.M. (hon.), *Professor of Physiology and Head of the Department.*

JAMES L. WHITTENBERGER, S.B., M.D., *Associate in Physiology.*

ESTHER HARDENBERGH, A.B., A.M., *Instructor in Physiology.*

JYTTE M. MUUS, M.Sc., *Instructor in Physiology.*

J. WILLIAM HEIM, S.M., Ph.D., *Assistant in Physiology.*

FRANK W MAURER, A.B., Ph.D., *Lecturer in Physiology.*

Physiology 1b. Ecology

Lectures. *Mondays, Wednesdays and Fridays, 11-12, fifth, sixth and seventh months.* Dr. DRINKER and associates.

Credit 2 units.

Ecology is that branch of biological science which deals with the relations of living organisms to their surroundings.

It is the effort of sanitary engineering to provide living and working conditions safe and tolerable for man all over the world and under many different circumstances. The human organism reacts characteristically to many changes in physical environment, to chemical changes in the atmosphere, and to alterations in food supply. In every instance large groups of people are involved and a reasonable knowledge of the principles of public health thus requires realization of the effects of the commoner environmental conditions met by man. These are heat, cold, humidity, dryness, alterations in barometric pressure, light, contamination of the atmosphere by smoke, dusts and chemicals, and changes in diet.

The course will consist of lectures, conferences and demonstrations covering the reaction caused by the varieties of human experience.

Physiology 20. Research in Physiology

Properly qualified students will be given opportunities to work in the laboratory provided they can spend at least six months of undivided time.

DEPARTMENT OF PUBLIC HEALTH BACTERIOLOGY

....., *Professor of Public Health Bacteriology and Head of the Department.**

....., *Assistant Professor of Public Health Bacteriology.*

J. HOWARD MUELLER, S.M., Ph.D., A.M. (hon.), *Professor of Bacteriology and Immunology.*

F. SARGENT CHEEVER, A.B., M.D., *Silas Arnold Houghton Assistant Professor of Bacteriology and Immunology.*

* The new Professor and Head of the Department, and associates will be announced later.

ELLIOTT S. A. ROBINSON, A.B., M.D., Ph.D., *Assistant Professor of Applied Immunology and Director of the Division of Biologic Laboratories, Department of Public Health of Massachusetts.*

GEOFFREY EDSALL, M.D., *Instructor in Bacteriology and Immunology and Acting Director of the Division of Biologic Laboratories, Department of Public Health of Massachusetts.*

WILLIAM A. HINTON, S.B., M.D., *Instructor in Bacteriology and Immunology, and Chief of Wassermann Laboratory, Department of Public Health of Massachusetts.*

Public Health Bacteriology 1b. Recent Advances in Bacteriology

Lectures, seminars and demonstrations. *Mondays and Wednesdays, 9-10, Saturdays, 9-11, fifth and sixth months.* Dr. ——— and associates.

Credit 2 units.

This course covers recent advances in knowledge of bacteria, viruses and rickettsiae, with emphasis on points of importance in public health.

Prerequisite: Medical bacteriology.

Public Health Bacteriology 2b. Applied Immunology

Lectures and laboratory work. *Eighth month or at times to be arranged, at State Antitoxin Laboratory.* Dr. ROBINSON, Dr. EDSALL and associates.

Credit 1 unit.

The application of immunological theory to the prevention and treatment of disease, as evidenced in the manufacture of serums, vaccines, and related products, is developed by lectures, discussions and laboratory demonstrations. The content of the course is dependent upon the training and interests of students. Opportunities are also offered for study of and training in the manufacture of biologic products or for original work in problems related to these processes, at times to be arranged individually.

This course will not be given for less than five students but arrangements for special work at the Antitoxin Laboratory will be made for anyone interested.

Public Health Bacteriology 3a and 3b. Serological Diagnosis of Syphilis

Conferences and laboratory work. Time and credit to be arranged. Dr. HINTON.

A short course in theoretical and practical aspects of serologic tests for syphilis is open to selected students at the Wassermann Laboratory of the Massachusetts Department of Public Health. The relation of laboratory methods to epidemiologic studies and to programs of control receive special consideration.

Public Health Bacteriology 20. Research

Properly qualified students may do research in bacteriology by arrangement with the head of the Department.

DEPARTMENT OF PUBLIC HEALTH PRACTICE

....., *Professor of Public Health Practice and Head of the Department.**

C. WALTER CLARKE, A.M., M.B.Ch.B., *Clinical Professor of Public Health Practice.*

VLADO A. GETTING, A.B., M.D., Dr.P.H., *Lecturer on Public Health Practice and Commissioner of Public Health, Department of Public Health of Massachusetts.*

ALTON S. POPE, A.B., M.D., Dr.P.H., *Instructor in Public Health Practice and Deputy Commissioner, Department of Public Health of Massachusetts.*

ROY F. FEEMSTER, A.B., M.D., Dr.P.H., *Instructor in Public Health Practice and Director of the Division of Administration, Department of Public Health of Massachusetts.*

HERBERT L. LOMBARD, A.B., M.D., M.P.H., *Instructor in Public Health Practice and Director, Division of Cancer and Other Chronic Diseases, Department of Public Health of Massachusetts.*

NORBERT A. WILHELM, M.D., *Instructor in Public Health Practice and Director, Peter Bent Brigham Hospital.*

ERNEST M. MORRIS, A.B., M.D., M.P.H., *Instructor in Public Health Practice and Director of Public Health, City of Newton, Massachusetts.*

ROBERT E. ARCHIBALD, M.D., M.P.H., *Instructor in Public Health Practice and Director, Division of Local Health Administration, Department of Public Health of Massachusetts.*

ARTHUR E. BURKE, S.B., M.D., *Instructor in Public Health Practice and District Health Officer, Department of Public Health of Massachusetts.*

LOREN D. MOORE, M.D., *Instructor in Public Health Practice and Assistant Director, Division of Biologic Laboratories, Department of Public Health of Massachusetts.*

STANLEY COBB, A.B., M.D., *Bullard Professor of Neuropathology.*

PAUL K. LOSCH, D.D.S., *Assistant Professor of Clinical Dentistry.*

SHIELDS WARREN, A.B., M.D., *Assistant Professor of Pathology.*

F. WILLIAM MARLOW, JR., S.B., M.D., *Associate in Medicine.*

* Now vacant due to death of Professor Edward G. Huber. The new Professor and Head of the Department will be announced later.

Public Health Practice 1a. Principles of Public Health Administration

Lectures. *Tuesdays, Thursdays and Saturdays, 9-10, fall term.* Dr. ——— and associates.

Credit 3 units.

The aim of this course is to study organizational structure and the operation of administration as applied to the practice of public health. This subject is developed through a study of the principles of public administration, of organization, of personnel management, of public health law, of budgeting and of leadership. With the increasing complexity of government, the health commissioner devotes more and more of his time to administration in general, as distinguished from technical administration in the specialty of public health. The health commissioner, therefore, should understand his relationship to other departments, divisions and bureaus of federal, state and municipal governments and to non-official agencies. These subjects receive full consideration in the lectures. In order to develop the specific duties of the administrator of a health department, studies will be made of typical problems which present themselves and of the best solutions to these problems. The purpose of this case history method of presentation is to demonstrate the application of the principles of public health to its practice.

Public Health Practice 2b. Organization and Administration of Health Department Subdivisions

Seminars, conferences and field studies. *Tuesdays, 10-12, and Thursdays, 10:30-12:30, fifth and sixth months; Tuesdays, 10:30-12:30, seventh and eighth months.* Dr. ——— and associates. This course will not be given for less than ten students.

Credit 1.5 units.

This course is supplementary to Public Health Practice 1a in that its subject matter consists chiefly of topics which relate to problems in technical administration in the public health field. The seminar members will be expected occasionally to lead discussions, as well as to participate when seminars are led by non-resident consultants who are leaders in their respective fields. The purpose of the seminars is the study of practical problems of organization and of administration of national, state, district and local health departments. Research into these problems is encouraged.

Students are given opportunities throughout the year to observe and study public health administration in all its aspects by visiting as frequently as is possible certain health departments at state, district, municipal and rural governmental levels.

Public Health Practice 3a. History of Public Health

[Lectures and seminars. *Tuesdays, 1:30-3:30, fall term.* Dr. ——— and associates.] Omitted 1946-47.

Credit 1 unit.

This course deals with the growth of the modern public health movement with special emphasis on its progress in Anglo-Saxon countries. The cultural, social and economic forces which have influenced this movement are carefully studied in their relationship to the evolution of the science of public health.

Public Health Practice 4b. Venereal Disease Control

Lectures, demonstrations and discussions. *Mondays, Wednesdays and Fridays, 9-11, seventh and eighth months.* Dr. CLARKE.

Credit 2.5 units.

This course presents, first, the basic medical data regarding syphilis, gonorrhea, chancroid, granuloma inguinale and lymphogranuloma venereum as communicable diseases, and, second, their epidemiology, prevention and administrative control. During the first part of the course the subject matter is presented by means of lectures, motion pictures, slides and clinical demonstrations. The second part is devoted to lectures and class discussions of practical problems involved in the public health control of venereal diseases.

Clinics

Clinical instruction in syphilis at the Peter Bent Brigham Hospital. *Wednesdays, 6-8 P.M., and Thursdays, 1-3:00 P.M.* Dr. MARLOW.

These clinics are available during the entire year to all public health students; those who are planning to do public health work in this field are expected to spend considerable time in them and to participate in the work.

Credit units according to amount of work done.

Clinical instruction in gonorrhea at the Peter Bent Brigham Hospital. *Mondays through Saturdays, 8:30-11:30 A.M.*

These clinics, while especially designed for students whose major interest is the control of the venereal diseases, are also available to other students.

Credit units according to amount of work done.

Serological Diagnosis. Dr. HINTON. See page 38.

Field Work

Field work in the Bureau of Social Hygiene, City of New York Department of Health. *July, August and September.* Dr. CLARKE, with the assistance of officers of the New York City Department of Health, Bureau of Social Hygiene.

Here half time will be devoted to administration and half to active work in clinics, rotating in each case from post to post. Weekly conferences with Dr. CLARKE will be held in order to coordinate the various activities in which the students have participated.

Public Health Practice 5a. Control of Tuberculosis

Lectures and field exercises. *Fridays, 10-11, fall term and Thursdays, 1:30-4:30, second and third months.*

Credit 1.5 units.

The aim of this course is to discuss the control measures applicable in public health practice. The subject is viewed more from the standpoint of the administrator than from that of the epidemiologist and the specialist, although specialists in this field will lead the discussions.

Several afternoons will be devoted to field trips to study the subject in the state, county and municipal hospitals of Massachusetts.

Public Health Practice 6b. Control of Cancer

Seminars. *Thursdays, 8:30-10:30, fifth and sixth months.* Dr. WARREN. The course will not be given for less than ten students.

Credit .5 unit.

The aim of this course is to describe the special methods which are applicable to cancer control. The subject is viewed from the standpoint of the administrator rather than from that of the epidemiologist or of the specialist.

Public Health Practice 7b. Hospital Administration

Seminars and field exercises. *Tuesdays and Thursdays, 8:30-10:30, seventh and eighth months. Six afternoon field trips to be arranged.* This course will not be given for less than ten students.

Credit 2 units.

Modern public health organization indicates a growing trend for the local health officer to be directly responsible for city or county hospital management. In recognition of the fact that hospital administration, even of small hospitals, is becoming increasingly complex, health officers and others are seeking instruction in this specialized field. A program has been developed, therefore, which covers the principles of hospital administration. No attempt is made in this brief course to develop hospital administrators but rather to teach the public health student those principles which will enable him to know whether the hospital for which he is responsible is being managed efficiently and economically. To do this, it is not necessary to know details of hospital administration but it is essential to have sufficient knowledge of the fundamentals.

The faculty will include authorities in their respective fields and subjects will include History and Development of Hospitals, Organization and Man-

agement, Construction, Personnel Management in Hospitals, Hospitals and Public Health, Legal, Political and Sociological Aspects of Hospital Administration, Public Relations and Hospitals, Educational Functions of Hospitals. The greater part of the course is didactic in nature, but opportunities are afforded to visit different types of hospitals in Massachusetts.

Public Health Practice 8a and 8b. Conferences in Hospital Administration

Fall or spring term. Time and credit to be arranged. Dr. WILHELM. Limited to five students.

This course is designed for students who elect Public Health Practice 7b and for certain others who are interested in attending daily administrative conferences at the Peter Bent Brigham Hospital.

Public Health Practice 9a. Psychosocial Problems

Lectures and discussions. *Fridays, 11-12, first and second months.*

Credit .5 unit.

This course is concerned with the study of abnormal behavior which results in social problems, and with the mechanisms producing abnormal mental reactions. Methods of handling these problems through community resources are discussed.

Public Health Practice 10b. Public Speaking

Spring term. Time and credit to be arranged; not given for less than ten students.

This course is designed to provide instruction in the clear and effective communication of public health subjects to audiences. Those elements of composition which are especially important in spoken presentations are stressed, such as clarity of structure, the use of good illustrations and of direct non-scientific vocabulary, and the adaptation of the subject matter to different types of audiences. Attention is given to training the voice for effective delivery, both from the public platform and before the microphone.

Public Health Practice 11b. Medical Administration

Seminars. *Two hours a week for four months.* Time and credit to be arranged; not given for less than ten students.

This course is offered in recognition of the growing tendency to make medical administration in general a function of the health department. It undertakes to give instruction in clinic management, in hospital service plans, in methods of distributing the costs of medical care through the insurance device, and in home and office medical service such as is provided at the Boston Dispensary.

Public Health Practice 12b. Dental Public Health Practice

Conferences, seminars and field exercises. Time and credit to be arranged. Dr. LOSCH.

Graduates in dentistry who are accepted as candidates for the degree of Master of Public Health are required to take the basic courses which are prescribed for that degree. They are assumed to have had adequate training and experience in all phases of clinical dentistry but as additional experience, opportunities are provided in the Forsyth Infirmary and in the Harvard School of Dental Medicine.

Opportunities for field work in public health dentistry are provided in the Massachusetts Department of Public Health and in the Health Department of the City of Newton.

Public Health Practice 20. Research

Advanced students are offered the opportunity to undertake special studies in Public Health Practice. The student must have completed Biostatistics 1a and Public Health Practice 1a before registering for this work.

DEPARTMENT OF SANITARY ENGINEERING

GORDON M. FAIR, S.M., *Dean of the Graduate School of Engineering, Abbot and James Lawrence Professor of Engineering, Gordon McKay Professor of Sanitary Engineering and Head of the Department.*

MELVILLE C. WHIPPLE, A.M. (hon.), *Associate Professor of Sanitary Chemistry.*

EDWARD W. MOORE, A.M., *Associate Professor of Sanitary Chemistry.*

SHIH L. CHANG, M.D., Dr.P.H., *Assistant Professor of Sanitary Biology.*

HAROLD A. THOMAS, JR., S.D., *Assistant Professor of Sanitary Engineering.*

J. CARRELL MORRIS, S.B., Ph.D., *Assistant Professor of Sanitary Chemistry.*

Sanitary Engineering 1a. Principles of Sanitation

Lectures and demonstrations. *Tuesdays, Thursdays, and Saturdays, 10-12, fall term.* Professor FAIR, Professor DRINKER and associates.

Credit 4 units.

A course of lectures, demonstrations and inspections arranged especially for students in the School of Public Health. The following topics will be studied: (a) Water Supply — collection, purification, and distribution; (b) Sewerage — collection, treatment, and disposal; (c) Analysis of Water and Sewage — physical, chemical, and biological; (d) Housing; (e) Rural Sanitation; (f) Biological Control — insects and rodents; (g) Food Sanitation — production, preservation, distribution, and preparation; (h) Milk Sanitation; (i) Shellfish Sanitation; (j) Garbage and Refuse — collection and disposal;

(*k*) Sanitation of Schools, Camps and Bathing Places; (*l*) Ventilation — air supply, purification, conditioning; (*m*) Noise — appraisal, control; (*n*) Illumination — appraisal, control.

Sanitary Engineering 2a and 2b. Sanitary Bacteriology

Laboratory and field work. *Fall and spring term.* Time and credit to be arranged. Associate Professor MOORE.

Examination of water and water supplies, milk and milk supplies, swimming pools, drainage systems, and food handling establishments. Experimental water purification and sewage treatment.

The following courses of instruction offered in the Graduate School of Engineering are open to properly qualified students:

Engineering 400a. Water Supply, Sewerage and Waste Disposal. Professor FAIR.

Engineering 400b. Water and Sewage Treatment Works. Professor FAIR.

Engineering 410a. Examination of Water and Sewage. Associate Professor WHIPPLE.

Engineering 411a and 411b. Sanitary Bacteriology. Dr. CHANG.

Engineering 412a, 412b and 414a. Engineering Chemistry. Dr. MORRIS.

Engineering 413b. Sanitary Parasitology. Dr. CHANG.

Engineering 430b. Theory of Water and Sewage Treatment. Associate Professor MOORE.

Engineering 431b. Experiments in Water and Sewage Treatment. Associate Professor WHIPPLE.

Engineering 432a. Industrial Wastes and Municipal Refuse. Associate Professor MOORE.

Engineering 433b. Stream Sanitation. Professor FAIR and Dr. RENN.

Engineering 434b. Industrial Water Supplies. Associate Professor MOORE.

STUDENTS 1945-46

CANDIDATES FOR THE DEGREE OF MASTER OF PUBLIC HEALTH

Atkins, Jorge E., M.D.	Piura, Peru
Booth, John A., A.B., M.D.	Winthrop, Mass.
Braga, Edgar T., M.D.	Niteroi, Brazil
Brewster, Harold N., M.D.	Foochow, China
Collins, Harvey S., S.B., A.M., M.D.	Sewickley, Pa.
Conley, L. Ann, S.B.	Washington, D. C.
Cramer, Elaine S., A.B.	Baltimore, Md.
Donoghue, Mary A., A.B.	Worcester, Mass.
Dunning, James M., A.B., D.D.S.	Cambridge, Mass.
Grannum, Frank N., M.B.Ch.B., D.T.M.&H.	Bridgetown, B.W.I.
Hadjimarkos, Demetrios M., D.D.S., M.S.D.	Athens, Greece
Horton, Robert J. M., A.B., M.D.	Philadelphia, Pa.
Joseph, Aurele A., M.D.	Port-au-Prince, Haiti
Kenny, George A., Ph.B., S.M.	Warwick Neck, R. I.
Khan, Ali N., M.B., D.P.H.	Noakhali, India
Kossuth, Louis C., A.B., M.D.	Wheeling, W. Va.
Kubin, Milford T., A.B., M.D.	McPherson, Kan.
Lemoine, Eddy M., M.D.	Port-au-Prince, Haiti
Lockwood, Elizabeth A., S.B., A.M.	Ithaca, N. Y.
Matthews, Anne R., S.B., S.M.	Worton, Md.
Moseley, Charles H., A.B., M.D.	Anderson, S. C.
Muñoz, José A., M.D.	Guatemala City, Guatemala
Nichols, Marion E., S.B.	Waban, Mass.
Orth, Gottlieb L., S.B., M.D.	Wahpeton, N. D.
Reeves, Mary R., S.B.	St. Joseph, Mo.
Richmond, Albert M., A.B., M.D.	Abilene, Texas
Robertson, Harry J., V.M.D.	National Park, N. J.
Saint-Victor, Roger E., M.D.	Port-au-Prince, Haiti
Schuhmann, George N., S.B., M.D.	Brooklyn, N. Y.
Schulze, Hartwin A., S.B., M.D.	Henrietta, N. Y.
Sen, Muktha, M.B.B.S., D.M.C.W.	Calcutta, India
Shuey, Harold E., A.B., M.D.	Eugene, Oregon
Song, Hyung N., M.B.	Seoul, Korea
Thomas, Lucius G., S.B., M.D.	Washington, D. C.
Tontar, Silvio, M.D.	Lowell, Mass.
Trulson, Martha F., S.B.	Stoughton, Wis.
White, Norman W., A.B., M.D.	Longport, N. J.
Whong, Long W., S.B., M.D.	Taiku, Korea

SPECIAL STUDENTS

Angus, Mary J., B.H.S.	Victoria, B. C.
Baker, Mary C., A.B.	Boston, Mass.
Beach, Ruth M., A.B.	Summit, N. J.
Benson, Robert G.	Boston, Mass.
Brea, Raul J., M.D.	Montevideo, Uruguay
Brimley, Emanuel V.	New Bedford, Mass.
Bustamante, Fernando M., M.D.	Rio de Janeiro, Brazil
Choi, Myong R., A.M., M.D.	Seoul, Korea
Christiansen, Lois E., S.B.	Cumberland Center, Maine
Clement, Esther M., A.B., A.M.	Boston, Mass.
Guimarães, Fausto P., M.D.	Rio de Janeiro, Brazil
Kilham, Lawrence, A.B., A.M., M.D.	Boston, Mass.
Koch, Joan M., S.B.	Montague City, Mass.
Kraft, Lisbeth M., S.B., D.V.M.	Ithaca, N. Y.
Longman, Doris P., S.B.	Detroit, Mich.
Portillo, Carlos F., M.D.	Tegucigalpa, Honduras
Randall, Mildred N., S.B.	Cleveland, Ohio
Robie, Natalie A., S.B.	Brookline, Mass.
Romeu, Luiz B., M.D., M.P.H.	Niteroi, Brazil
Shepardson, Theodore, S.B.	Worcester, Mass.
Spangler, Huston K., A.B., M.D.	Worcester, Mass.
Vye, Tucker M.	Braintree, Mass.
Wetherby, Una V., S.B.	Boston, Mass.

DEGREES

On June 28, 1945, the following Degrees were conferred:

DOCTOR OF PUBLIC HEALTH

- Grace Elizabeth Lutman, S.B. (*Univ. of Vermont*) 1935, M.D. (*ibid.*) 1938,
M.P.H. (*Harvard Univ.*) 1942.
Thesis: The Epidemiologic Significance of Seasonal Prevalence of Disease.
Special Field: Epidemiology.
- Manthripragada Narasimha Rao, M.B.B.S. (*Andhra Medical Coll., India*)
1934, M.P.H. (*Harvard Univ.*) 1944.
Thesis: Objective Appraisal of Silicosis — A Physiological Approach to
the Problem.
Special Field: Industrial Hygiene.

MASTER OF PUBLIC HEALTH, *cum Laude*

- Virginia Asta Beal, S.B. (*Simmons Coll.*) 1939.
 Laurence Justin Charles, M.B.Ch.B. (*Edinburgh Univ.*) 1938.
 Irma Haydee Seijo, S.B. (*Univ. of Puerto Rico*) 1937.

MASTER OF PUBLIC HEALTH

- Bertrand François Bellemare, A.B. (*Loyola Coll.*) 1939, M.D. (*Laval Univ.*) 1943.
 Gwendolyn Leanora Benjamin, S.B. (*West Chester State Teachers Coll.*) 1944.
 Liang Chung Cha, M.D. (*Peiping Union Medical Coll.*) 1931.
 Mary Frances Champlin, S.B. (*Fla. State Coll. for Women*) 1927.
 Mei-yu Cheng, M.D. (*Women's Christian Medical Coll., China*) 1935.
 Sarah Jenny Denaro, A.B. (*Radcliffe Coll.*) 1944.
 Howard Abram Eder, A.B. (*Univ. of Wisconsin*) 1938, M.D. (*Harvard Univ.*) 1942.
 Raquel Eidelman, B.Chem. (*San Marcos Univ., Peru*) 1943.
 Roslyn Ulman Fishman, A.B. (*Brooklyn Coll.*) 1939.
 Lucille Mary Harmon, S.B. in N. (*Western Reserve Univ.*) 1941.
 Ying Hsueh, S.B. (*Hamline Univ.*) 1944.
 Charles Morris McGill, S.B. (*Univ. of Washington*) 1931, M.D. (*Vanderbilt Univ.*) 1935.
 Carlos Manuel Muñoz, D.V.M. (*Ohio State Univ.*) 1935.
 Pedro Nicolau Gonçalves Santos Rosado, M.D. (*School of Medicine and Surgery of Para, Brazil*) 1932.
 Ruth Anoline Rothmayer, S.B. (*Columbia Univ.*) 1943.
 Edison de Freitas Teixeira, M.D. (*Univ. of Brazil*) 1930.
 Rogelio Valladares, M.D. (*Central Univ., Venezuela*) 1940.
 Mae Elizabeth Vaughn, S.B. (*Keuka Coll.*) 1938.

On February 25, 1946, the following Degrees were conferred:

DOCTOR OF PUBLIC HEALTH

- Martha Alice O'Malley, M.D. (*Univ. of Iowa*) 1933, M.P.H. (*Harvard Univ.*) 1941.
Thesis: The Maternity Hospital in the Public Health Program.
Special Field: Public Health Practice.

MASTER OF PUBLIC HEALTH, *cum Laude*

Harold Nesbitt Brewster, M.D. (*Boston Univ.*) 1931.

On June 6, 1946, the following Degrees were conferred:

MASTER OF PUBLIC HEALTH, *cum Laude*

Elaine Shirley Cramer, A.B. (*Goucher Coll.*) 1943.

Frank Neville Grannum, M.B.Ch.B. (*Edinburgh Univ.*) 1925.

Louis Caspar Kossuth, A.B. (*West Virginia Univ.*) 1935, M.D. (*Western Reserve Univ.*) 1939.

Charles Henry Moseley, A.B. (*Wofford Coll.*) 1928, M.D. (*Vanderbilt Univ.*) 1935.

Gottlieb Leonard Orth, S.B. (*Univ. of Minnesota*) 1930, M.D. (*ibid.*) 1933.

Albert Marion Richmond, A.B. (*Univ. of Oregon*) 1929, M.D. (*Washington Univ.*) 1932.

Hartwin A. Schulze, S.B. (*Univ. of Chicago*) 1929, M.D. (*ibid.*) 1935.

Harold Eugene Shuey, A.B. (*Univ. of Oregon*) 1931, M.D. (*ibid.*) 1935.

Lucius George Thomas, S.B. (*John B. Stetson Univ.*) 1929, M.D. (*Univ. of Louisville*) 1933.

MASTER OF PUBLIC HEALTH

Jorge Ernesto Atkins, M.D. (*Univ. of San Marcos*) 1941.

John Austin Booth, A.B. 1933, M.D. 1937.

L. Ann Conley, S.B. (*Columbia Univ.*) 1942.

Mary Agnes Donoghue, A.B. (*Trinity Coll.*) 1928.

Demetrios Markos Hadjimarkos, D.D.S. (*Univ. of Athens*) 1931, M.S.D. (*Northwestern Univ.*) 1943.

Ali Nawab Khan, M.B. (*Calcutta Medical Coll.*) 1935.

Milford Timothy Kubin, A.B. (*McPherson Coll.*) 1925, M.D. (*Univ. of Kansas*) 1929.

Eddy Michel Lemoine, M.D. (*Univ. of Haiti*) 1942.

Elizabeth Anne Lockwood, S.B. (*Wayne Univ.*) 1932, A.M. (*Cornell Univ.*) 1938.

José Antonio Muñoz M., M.D. (*Univ. of Guatemala*) 1942.

Mary Rankin Reeves, S.B. (*Tarkio Coll.*) 1927.

Harry John Robertson, M.D.V. (*Univ. of Pennsylvania*) 1939.

George N. Schuhmann, S.B. (*Univ. of Louisville*) 1934, M.D. (*ibid.*) 1937.

Muktha Sen, M.B.B.S. (*Madras Medical Coll.*) 1935.

Hyung Nai Song, M.B. (*Keijo Medical Coll.*) 1938.

Norman Webb White, A.B. (*Columbia Univ.*) 1926, M.D. (*Jefferson Medical Coll.*) 1930.

Long Woon Whong, S.B. (*Mt. Union Coll.*) 1933, M.D. (*Univ. of Pittsburgh*) 1937.

MASTER OF PUBLIC HEALTH (*As of the Class of 1940*)

ARTHUR PAUL DUNNIGAN, S.B. (*Univ. of Maryland*) 1930, S.M. (*ibid.*) 1932, Ph.D. (*ibid.*) 1936.

MASTER OF PUBLIC HEALTH (*As of the Class of 1941*)

William French Skinner, S.B. (*Virginia Polytechnic Inst.*) 1928.

Gertrude Pauline Willmert, S.B. (*North Dakota State Coll.*) 1929, S.M. (*Univ. of Wisconsin*) 1936.

SCHEDULE OF COURSES

	FIRST MONTH (September 23–October 19)	SECOND MONTH (October 21–November 16)
Monday	9–10 Nutrition 1a 10–11 Maternal & Child Health 1a 11–12 Biostatistics 1a 1:30–4:30 Biostatistics 1a (Laboratory)	9–10 Nutrition 1a 10–11 Maternal & Child Health 1a 11–12 Biostatistics 1a 1:30–4:30 Biostatistics 1a (Laboratory)
Tuesday	9–10 Public Health Practice 1a 10–12 Sanitary Engineering 1a 1:30–4:30 Industrial Hygiene 2a 3:30–5:30 Maternal & Child Health 2a	9–10 Public Health Practice 1a 10–12 Sanitary Engineering 1a 1:30–4:30 Industrial Hygiene 2a 3:30–5:30 Maternal & Child Health 2a
Wednesday	9–10 Nutrition 1a 10–11 Maternal & Child Health 1a 11–12 Biostatistics 1a 1:30–4:30 Biostatistics 1a (Laboratory)	9–10 Nutrition 1a 10–11 Maternal & Child Health 1a 11–12 Biostatistics 1a 1:30–4:30 Biostatistics 1a (Laboratory)
Thursday	9–10 Public Health Practice 1a 10–12 Sanitary Engineering 1a 12–1 Nutrition 3a 1:30–4:30 Industrial Hygiene 2a	9–10 Public Health Practice 1a 10–12 Sanitary Engineering 1a 12–1 Nutrition 3a 1:30–4:30 Industrial Hygiene 2a 1:30–4:30 Public Health Practice 5a (Field Trips)
Friday	9–10 Nutrition 1a 10–11 Public Health Practice 5a 11–12 Public Health Practice 9a	9–10 Nutrition 1a 10–11 Public Health Practice 5a 11–12 Public Health Practice 9a
Saturday	9–10 Public Health Practice 1a 10–12 Sanitary Engineering 1a	9–10 Public Health Practice 1a 10–12 Sanitary Engineering 1a

SCHEDULE OF COURSES

THIRD MONTH (November 18-December 14)		FOURTH MONTH (December 16-January 29)	
		Recess December 22-January 5	
		Examinations January 27-29	
Monday	9-10 Nutrition 1a 10-11 Maternal & Child Health 1a 11-12 Biostatistics 1a 1:30-4:30 Biostatistics 1a (Lab- oratory)	9-10 Nutrition 1a 10-11 Maternal & Child Health 1a 11-12 Biostatistics 1a 1:30-4:30 Biostatistics 1a (Lab- oratory)	
Tuesday	9-10 Public Health Practice 1a 10-12 Sanitary Engineering 1a 1:30-4:30 Industrial Hygiene 2a 3:30-5:30 Maternal & Child Health 3a	9-10 Public Health Practice 1a 10-12 Sanitary Engineering 1a 1:30-4:30 Industrial Hygiene 2a 3:30-5:30 Maternal & Child Health 3a	
Wednesday	9-10 Nutrition 1a 10-11 Maternal & Child Health 1a 11-12 Biostatistics 1a 1:30-4:30 Biostatistics 1a (Lab- oratory)	9-10 Nutrition 1a 10-11 Maternal & Child Health 1a 11-12 Biostatistics 1a 1:30-4:30 Biostatistics 1a (Lab- oratory)	
Thursday	9-10 Public Health Practice 1a 10-12 Sanitary Engineering 1a 12-1 Nutrition 3a 1:30-4:30 Industrial Hygiene 2a 1:30-4:30 Public Health Practice 5a (Field Trips)	9-10 Public Health Practice 1a 10-12 Sanitary Engineering 1a 12-1 Nutrition 3a 1:30-4:30 Industrial Hygiene 2a	
Friday	9-10 Nutrition 1a 10-11 Public Health Practice 5a 11-12 Epidemiology 1a 1:30-4:30 Epidemiology 1a	9-10 Nutrition 1a 10-11 Public Health Practice 5a 11-12 Epidemiology 1a 1:30-4:30 Epidemiology 1a	
Saturday	9-10 Public Health Practice 1a 10-12 Sanitary Engineering 1a 9:30-10:30 Epidemiology 5a	9-10 Public Health Practice 1a 10-12 Sanitary Engineering 1a 9:30-10:30 Epidemiology 5a	

SCHEDULE OF COURSES

	FIFTH MONTH (February 3-March 1)	SIXTH MONTH (March 3-29)
Monday	9-10 P.H. Bacteriology 1b 10-11 Maternal & Child Health 1b 11-12 Physiology 1b 1:30-4:30 Epidemiology 2b 1:30-3:30 Industrial Hygiene 1b 1:30-3:30 Maternal & Child Health 5b	9-10 P.H. Bacteriology 1b 10-11 Maternal & Child Health 1b 11-12 Physiology 1b 1:30-4:30 Epidemiology 2b 1:30-3:30 Industrial Hygiene 1b 1:30-3:30 Maternal & Child Health 5b
Tuesday	9-10 Epidemiology 4b 10-12 Public Health Practice 2b 1:30-4:30 Biostatistics 2b 1:30-4:30 Industrial Hygiene 2b 3:30-5:30 Maternal & Child Health 4b	9-10 Epidemiology 4b 10-12 Public Health Practice 2b 1:30-4:30 Biostatistics 2b 1:30-4:30 Industrial Hygiene 2b 3:30-5:30 Maternal & Child Health 4b
Wednesday	9-10 P.H. Bacteriology 1b 10-11 Maternal & Child Health 1b 11-12 Physiology 1b 1:30-4:30 Epidemiology 2b 1:30-3:30 Industrial Hygiene 1b 1:30-3:30 Nutrition 2b	9-10 P.H. Bacteriology 1b 10-11 Maternal & Child Health 1b 11-12 Physiology 1b 1:30-4:30 Epidemiology 2b 1:30-3:30 Industrial Hygiene 1b 1:30-3:30 Nutrition 2b
Thursday	8:30-10:30 Public Health Practice 6b 10:30-12:30 Public Health Practice 2b 10:30-12:30 Maternal & Child Health 5b 12-1 Nutrition 3b 1:30-4:30 Biostatistics 2b 1:30-4:30 Industrial Hygiene 2b	8:30-10:30 Public Health Practice 6b 10:30-12:30 Public Health Practice 2b 10:30-12:30 Maternal & Child Health 5b 12-1 Nutrition 3b 1:30-4:30 Biostatistics 2b 1:30-4:30 Industrial Hygiene 2b
Friday	9-10 Epidemiology 4b 11-12 Physiology 1b 1:30-3:30 Epidemiology 2b 1:00-3:00 Industrial Hygiene 1b 1:30-3:30 Nutrition 2b 3:30-5:00 Epidemiology 4b	9-10 Epidemiology 4b 11-12 Physiology 1b 1:30-3:30 Epidemiology 2b 1:00-3:00 Industrial Hygiene 1b 1:30-3:30 Nutrition 2b 3:30-5:00 Epidemiology 4b
Saturday	9-11 P.H. Bacteriology 1b	9-11 P.H. Bacteriology 1b

SCHEDULE OF COURSES

SEVENTH MONTH (April 7-May 3)		EIGHTH MONTH (May 5-31) Examinations May 26-31	
Monday	9-11 Public Health Practice 4b	9-11 Public Health Practice 4b	
	11-12 Physiology 1b		
	1:30-4:30 Epidemiology 3b	1:30-4:30 Epidemiology 3b	
	1:30-3:30 Industrial Hygiene 1b	1:30-3:30 Industrial Hygiene 1b	
	1:30-3:30 Maternal & Child Health 5b	1:30-3:30 Maternal & Child Health 5b	
Tuesday	8:30-10:30 Public Health Practice 7b	8:30-10:30 Public Health Practice 7b	
	10:30-12:30 Public Health Practice 2b	10:30-12:30 Public Health Practice 2b	
	1:30-4:30 Biostatistics 2b	1:30-4:30 Biostatistics 2b	
	1:30-4:30 Industrial Hygiene 2b	1:30-4:30 Industrial Hygiene 2b	
	3:30-5:30 Maternal & Child Health 6b	3:30-5:30 Maternal and Child Health 6b	
Wednesday	9-11 Public Health Practice 4b	9-11 Public Health Practice 4b	
	11-12 Physiology 1b		
	1:30-4:30 Epidemiology 3b	1:30-4:30 Epidemiology 3b	
	1:30-3:30 Industrial Hygiene 1b	1:30-3:30 Industrial Hygiene 1b	
	1:30-3:30 Nutrition 2b	1:30-3:30 Nutrition 2b	
Thursday	8:30-10:30 Public Health Practice 7b	8:30-10:30 Public Health Practice 7b	
	10:30-12:30 Maternal & Child Health 5b	10:30-12:30 Maternal & Child Health 5b	
	12-1 Nutrition 3b	12-1 Nutrition 3b	
	1:30-4:30 Biostatistics 2b	1:30-4:30 Biostatistics 2b	
	1:30-4:30 Industrial Hygiene 2b	1:30-4:30 Industrial Hygiene 2b	
Friday	3:30-5:30 Maternal & Child Health 6b	3:30-5:30 Maternal & Child Health 6b	
	9-11 Public Health Practice 4b	9-11 Public Health Practice 4b	
	11-12 Physiology 1b		
	1:30-4:30 Epidemiology 3b	1:30-4:30 Epidemiology 3b	
	1:00-3:00 Industrial Hygiene 1b	1:00-3:00 Industrial Hygiene 1b	
Saturday	1:30-3:30 Nutrition 2b	1:30-3:30 Nutrition 2b	
	9-1 Epidemiology 3b	9-1 Epidemiology 3b	
	9:30-10:30 Epidemiology 5b	9:30-10:30 Epidemiology 5b	

KEY TO AERIAL VIEW

- I School of Public Health, 55 Shattuck Street
 - Administration, Departments of Biostatistics, Industrial Hygiene, Maternal and Child Health, Physiology and Public Health Practice
- A Administration Building, Medical School
 - First Floor, Student Health Office
 - Second Floor, Library
- B, C, D, E Laboratories and Classrooms, Medical School
- F Vanderbilt Hall
- II Peter Bent Brigham Hospital
- III and V Children's Hospital
- IV Lying-In Hospital
- VI School of Public Health, Huntington Memorial Building,
695 Huntington Avenue, Departments of Epidemiology,
Nutrition and Public Health Bacteriology





